

Amendments to the Specification

1. Please replace the paragraphs beginning on page 5, line 15, with the words "In a first preferred aspect, this invention..." and ending on page 5, line 26, with the words "...of at least 1.3." with the following amended paragraphs (the paragraphs which are being amended are those which were inserted by the amendment numbered 1. in the Submission under 37 CFR 1.114 mailed August 10, 2004).

In a first preferred aspect, this invention provides a gas-permeable membrane which is useful in the packaging of respiring biological materials and which comprises

- (a) a microporous polymeric film comprising a network of interconnected pores such that gases can pass through the film, and
- (b) a polymeric coating on the microporous film,

wherein

- (1) the pores in the microporous film have an average pore size of less than 0.24 micron;
 - (2) at least 70% of the pores in of the microporous film have a pore size of less than 0.24 micron;
 - (3) less than 20% of the pores in the microporous film have a pore size less than 0.014 micron;
 - (4) at least 80% of the pores in the microporous film have a pore size less than 0.15 micron; and
 - (5) the polymeric coating ~~changes~~ ~~changing~~ the permeability of the microporous film so that the membrane
 - (i) has an oxygen permeability (OTR), at all temperatures between 20° and 25°C, of at least 775,000 ml/m².atm.24hrs (50,000 cc/100 inch².atm.24hrs); and
 - (ii) has an R ratio of at least 1.5;
 the OTR and R values being measured at a pressure of 0.035 kg/cm².
- In some embodiments, ~~Optionally, depending upon the coating polymer~~, the membrane has a P₁₀ ratio, measured at a pressure of 0.035 kg/cm², over at least one 10°C range

between -3 and 15°C, of at least 1.3. In other embodiments, the membrane does not have a P_{10} ratio, measured at a pressure of 0.035 kg/cm², over at least one 10°C range between -3 and 15°C, of at least 1.3.

5 In a second preferred aspect, but this invention provides a gas-permeable membrane which is useful in the packaging of respiring biological materials and which comprises

(a) a microporous polymeric film comprising a network of interconnected pores such that gases can pass through the film, and

10 (b) a polymeric coating on the microporous film,

wherein

(1) the pores in the microporous film have an average pore size of less than 0.24 micron; and

(2) the microporous film was prepared by a process comprising the steps of

15 (A) preparing a uniform mixture comprising a polymeric matrix material in the form of a powder, a finely divided, particulate substantially water-insoluble filler, and a processing oil;

(B) extruding the mixture as a continuous sheet;

20 (C) forwarding the continuous sheet, without drawing, to a pair of heated calender rolls;

(D) passing the continuous sheet through the calender rolls to form a sheet of lesser thickness;

25 (E) passing the sheet from step (D) to a first extraction zone in which the processing oil is substantially removed by extraction with an organic extraction liquid which is a good solvent for the processing oil, a poor solvent for the polymeric matrix material, and more volatile than the processing oil;

30 (F) passing the sheet from step (E) to a second extraction zone in which the organic extraction liquid is substantially removed by steam or water or both; and

- (G) passing the sheet from step (F) through a forced air dryer to remove residual water and organic extraction liquid; and
- (3) the polymeric coating has a thickness such that the membrane
- (i) has an oxygen permeability (OTR), at all temperatures between 20 and 25°C, of at least 775,000 ml/m².atm.24hrs (50,000 cc/100 inch².atm.24hrs); and
- (ii) has a CO₂/O₂ permeability ratio (R) of at least 1.5; the OTR and R values being measured as a pressure of 0.035 kg/cm² (0.5 psi).

10 In some embodiments, Optionally, depending upon the coating polymer, the membrane has a P₁₀ ratio, measured at a pressure of 0.035 kg/cm², over at least one 10°C range between -3 and 15°C, of at least 1.3. In other embodiments, the membrane does not have a P₁₀ ratio, measured at a pressure of 0.035 kg/cm², over at least one 10°C range between -3 and 15°C, of at least 1.3.

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2. Please replace the paragraph beginning on page 5, line 28, with the words "In a second preferred aspect, this invention..." and ending on page 6, line 6,, with the words "... measured as a pressure of 0.035 kg/cm² ." with the following amended paragraph (the paragraph which is being amended is the paragraph which was inserted by the amendment numbered 4. in the Submission under 37 CFR 1.114 mailed August 10, 2004).

In a third preferred aspect, this invention provides a package which is for example stored in air and which comprises

- 25 (a) a sealed container, and
- (b) within the sealed container, a respiring biological material and a packaging atmosphere around the biological material, the sealed container including one or more permeable control sections ~~which provide at least the principal pathways and optionally substantially the only pathways for oxygen and carbon dioxide to enter or leave the~~
- 30 ~~packaging atmosphere~~, at least one said permeable control section being a gas-permeable membrane as defined in the first or second preferred aspect of the invention.

In some embodiments of the invention, the at least one permeable control section as defined in the first or second preferred aspect of the invention provides the sole pathway for gases to enter or leave the sealed container. In other embodiments of the invention, the at least one permeable control section as defined in the first or second
5 preferred aspect of the invention provides at least the principal pathway for gases to enter or leave the sealed container.